

Utah Department of Transportation Traffic Management Division

January 2018
Monthly Report



2060 South 2760 West Salt Lake City, Utah 84104 801-887-3710 www.udottraffic.utah.gov



Mission of the Traffic Management Division

- To Support UDOT and the Department of Public Safety to Achieve Zero Fatalities.
- To Help Provide Reliable and Efficient Travel Throughout Utah.
- To Provide Useful and Timely Real-time Traffic Information.
- To Work Together with Other Government Agencies to Serve the Public.
- To Provide Excellent Customer Service.

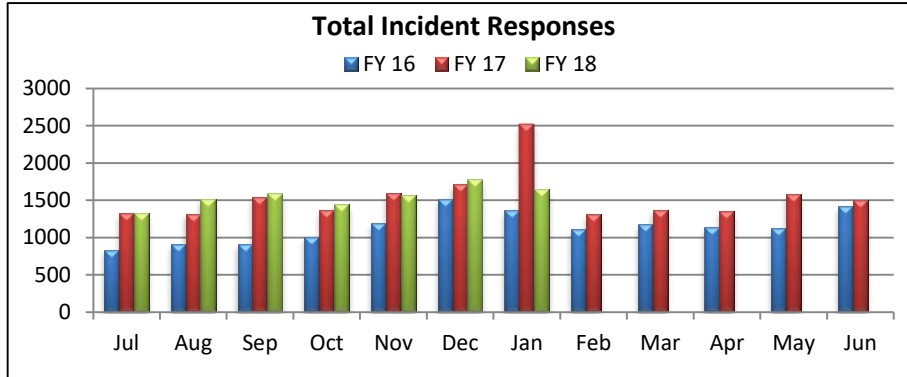
Field Devices Summary

Freeway PTZ Cameras	401	Freeway VMS	104
Arterial PTZ Cameras	554	Surface Street VMS	50
RWIS & Contracted Weather Cameras	233	Portable TOC VMS	7
Viewable Detection Cameras	38	Legacy Trucks Prohibited VMS	21
Total Cameras	1,226	Variable Speed Limit VMS	15
HAR (25 permanent/5 portable)	30	Chain-Up/Avalanche Warning Signs	25
RWIS	111	Total VMS	222
Ramp Meters	75	TMS	597
Express Lane Plazas	73	Traffic Signals	1,837

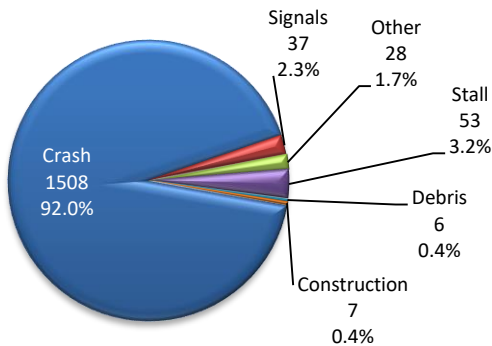
Operations Summary

VMS Messages Displayed	84,660	IMT Assists	1,929
Signal Timing Work Orders	34	Website Visitor Sessions	333,348
Signal Maintenance Work Orders	139	511 Calls	20,791
All New Work Orders	443	Weather Desk Calls	654
Incident Responses by the TOC	1,639	Ask CommuterLink Questions	54
Incident Duration Average Minutes	52	UDOT Traffic Followers and Re-tweets	697,666

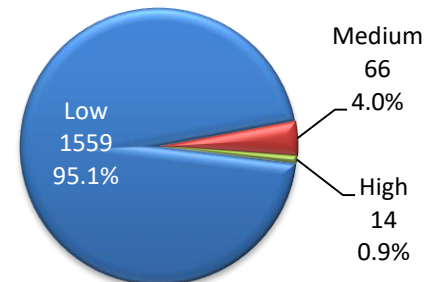
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.



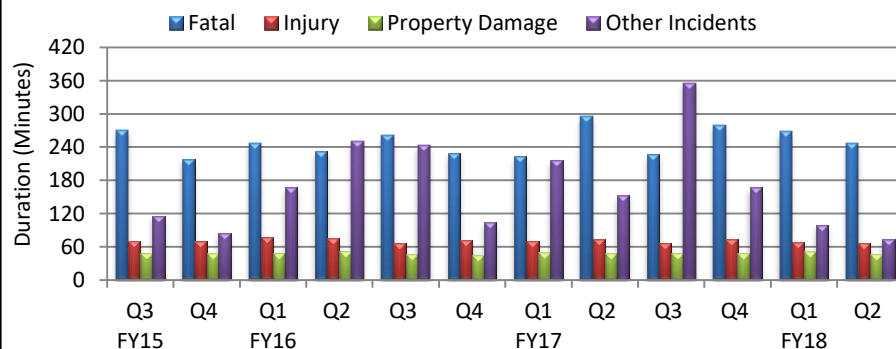
Incidents By Type for January 2018



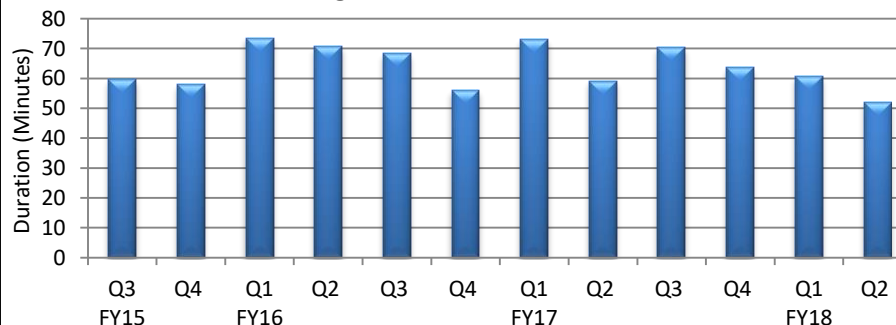
Incidents by Severity for January 2018



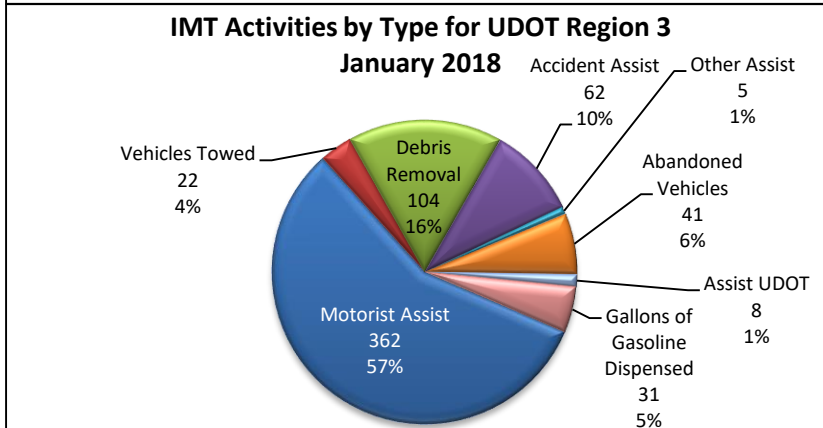
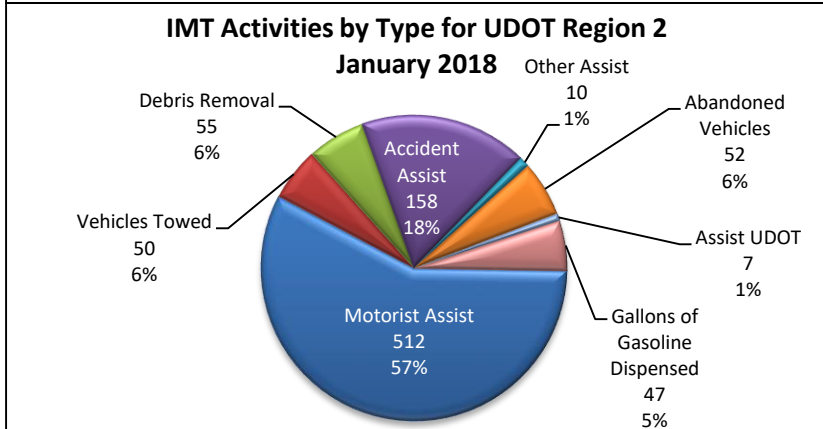
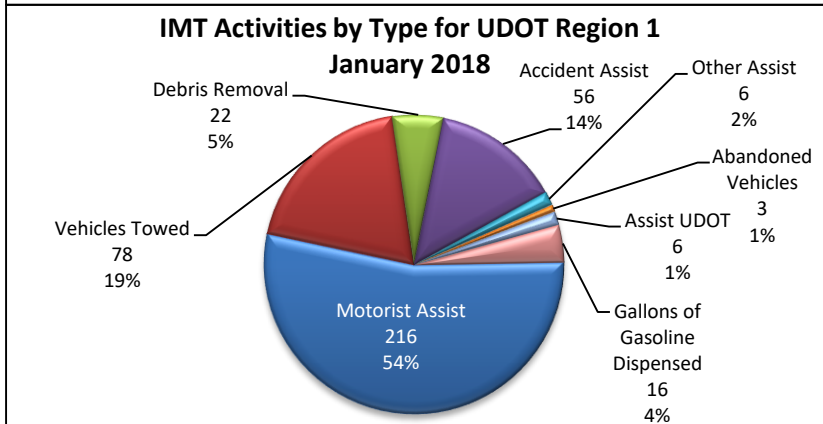
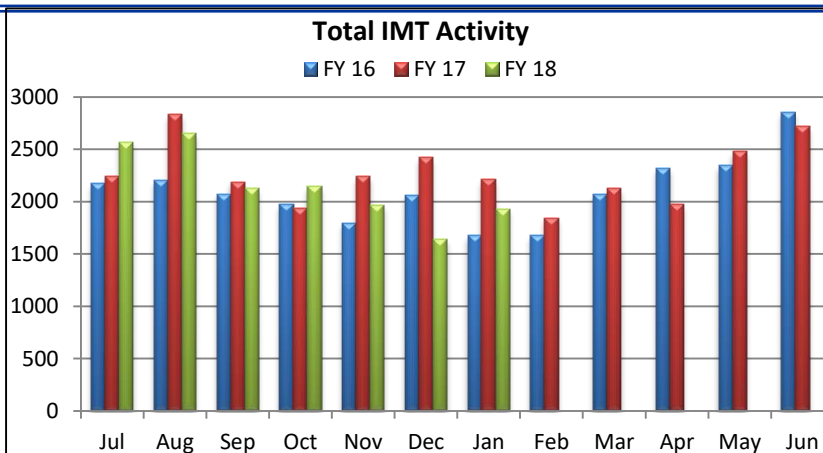
Average Crash Duration



Average Duration of All Incidents



Incident Management Team (IMT) Activities



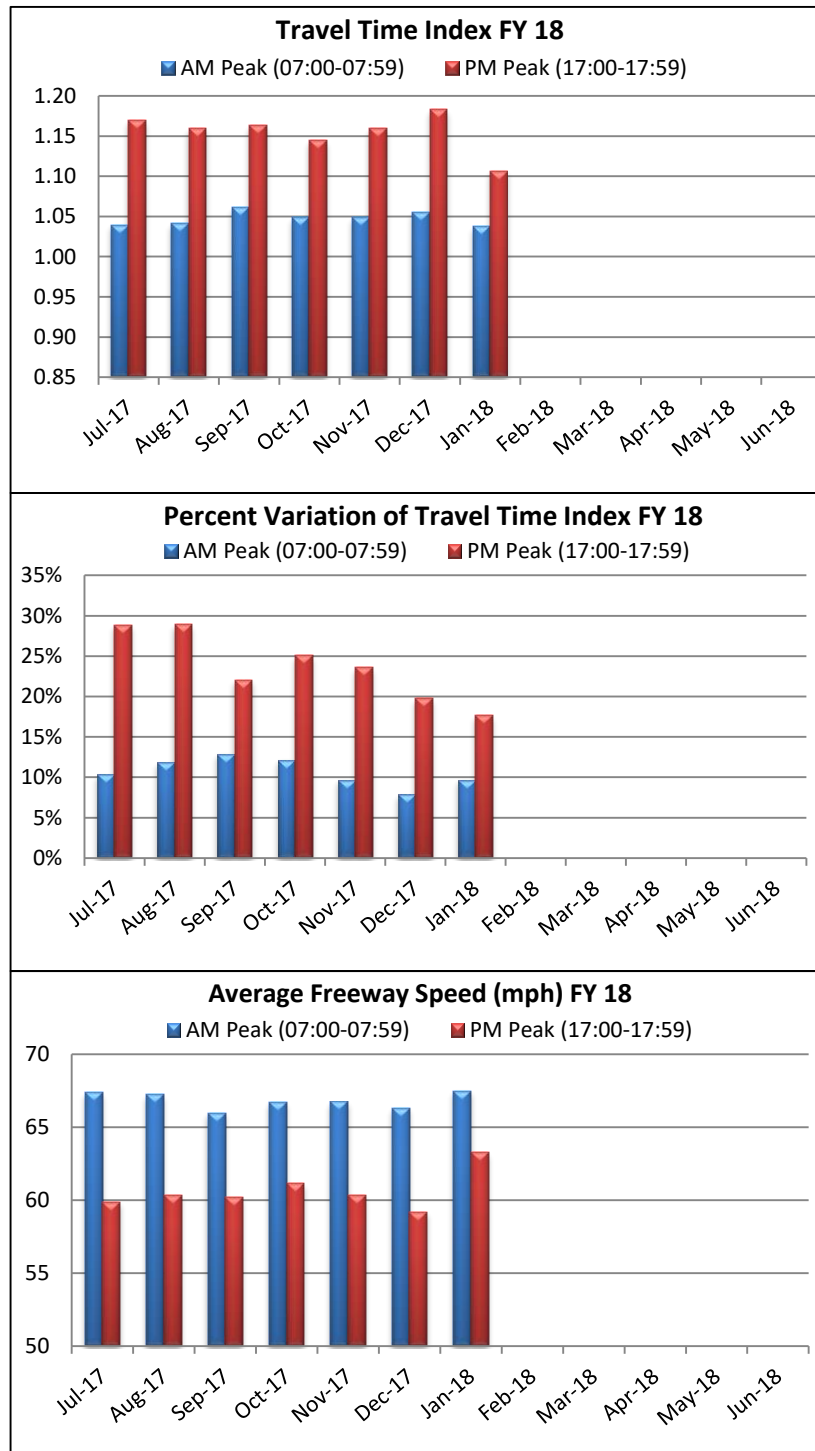
Freeway Traffic Level of Service

Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Wasatch Front. As more TMS sites are installed throughout the state, they will be included in these performance measures.

Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

Average Freeway Speed: The freeway speed is weighted by volume.



Freeway Traffic Level of Service

Peak Travel Time Index by Segment for January 2018

(+) Direction (NB, EB, Clockwise)

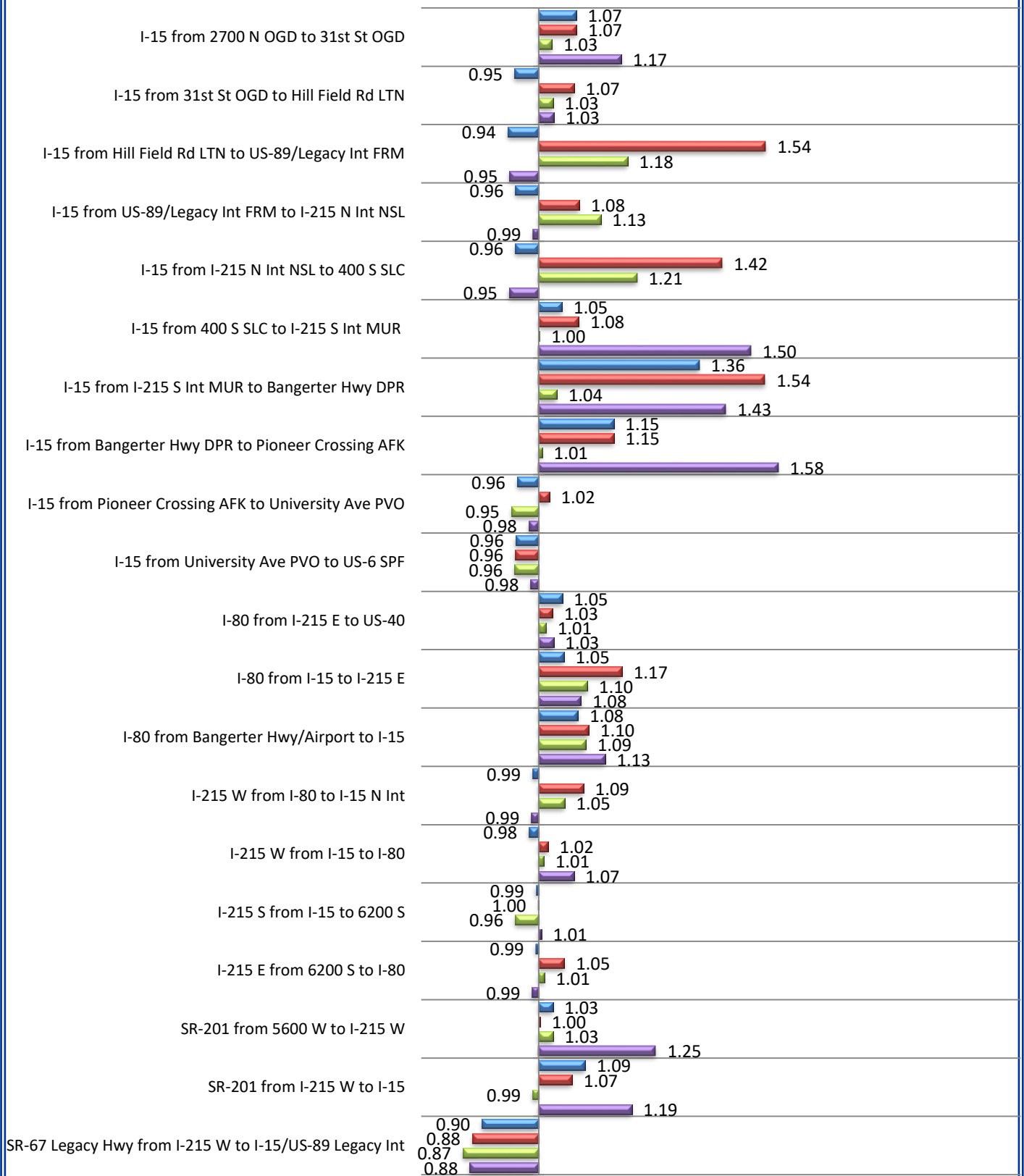
(-) Direction (SB, WB, Counter Clockwise)

■ AM Peak (07:00-07:59)

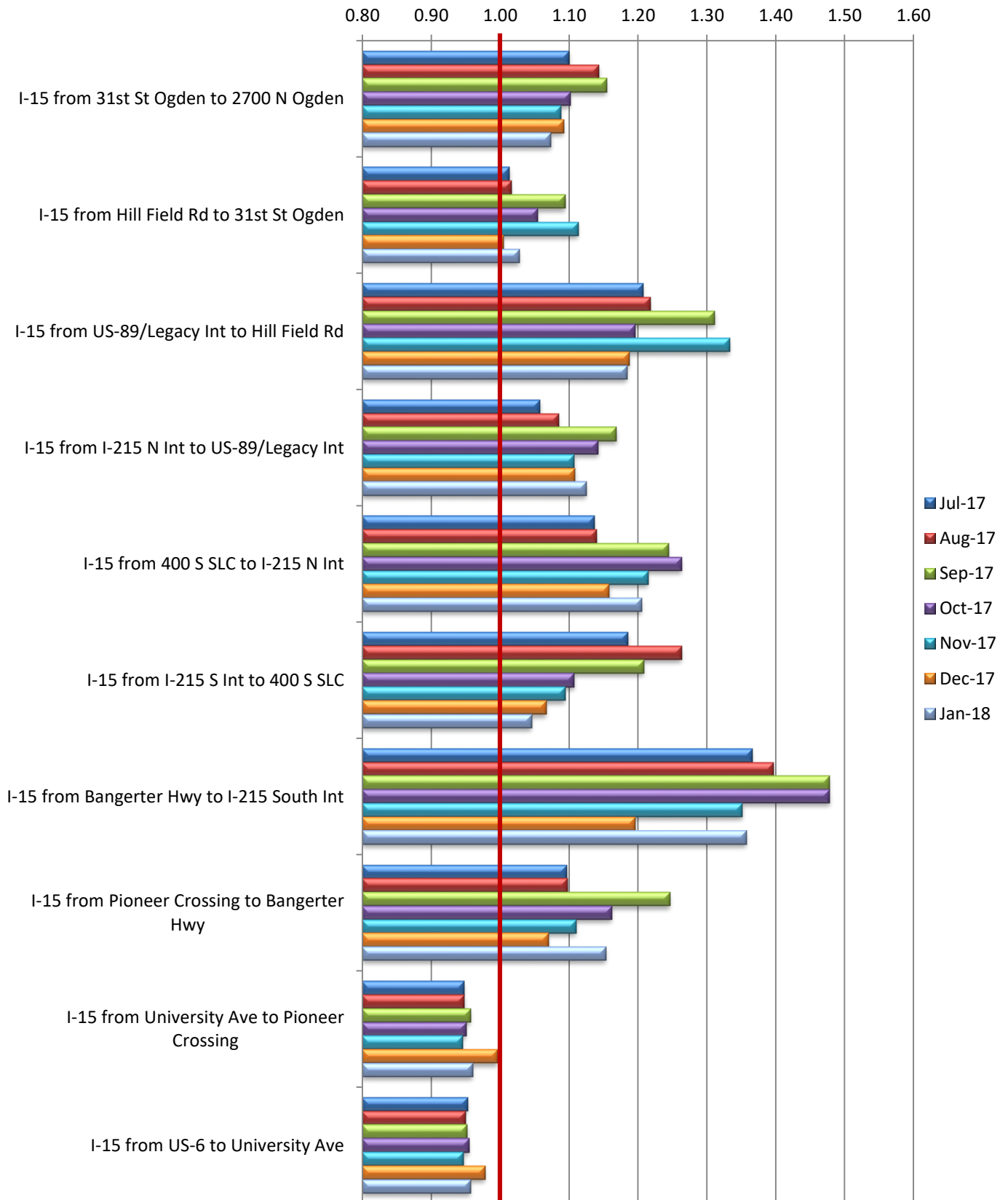
■ PM Peak (17:00-17:59)

■ AM Peak (07:00-07:59)

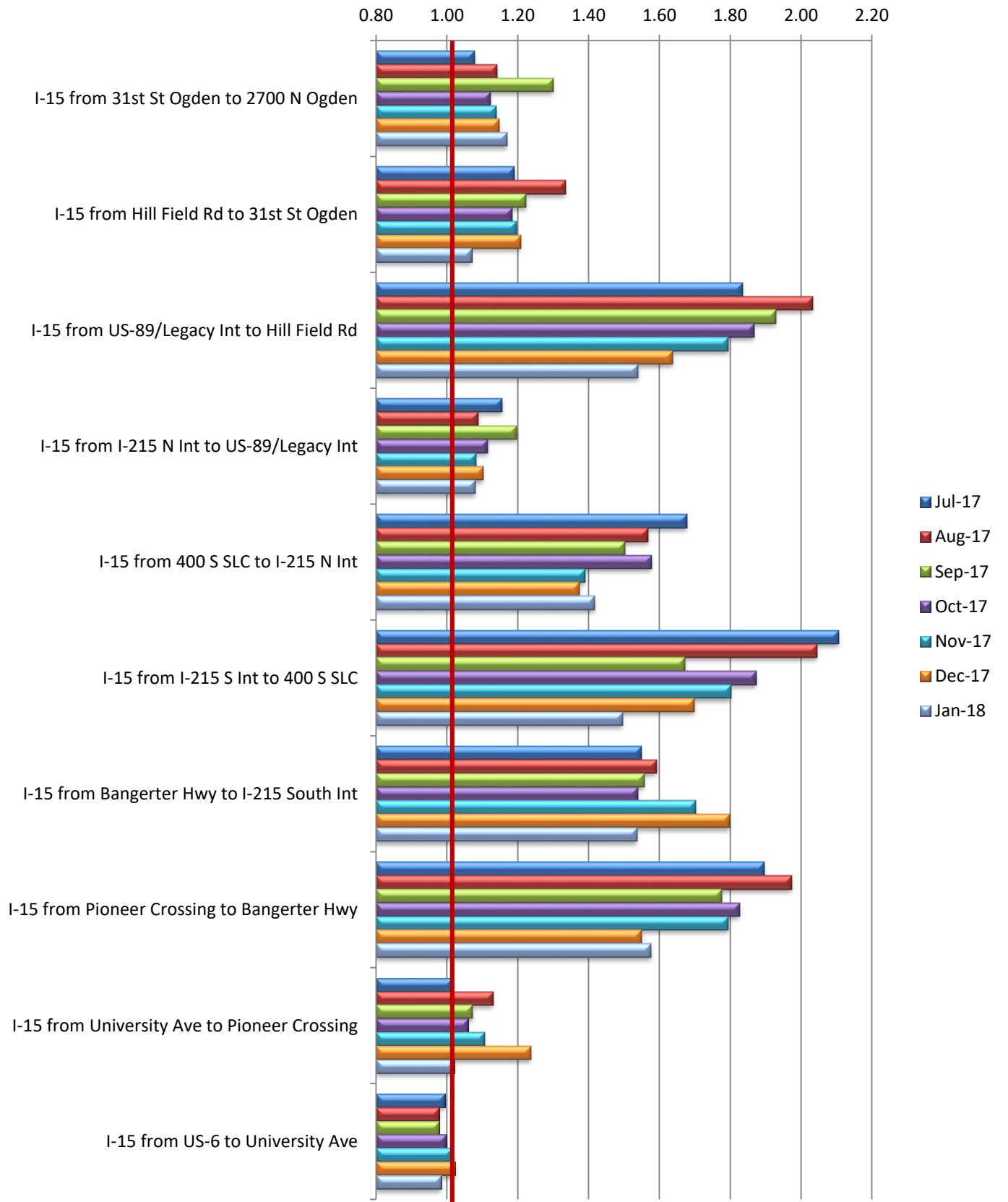
■ PM Peak (17:00-17:59)



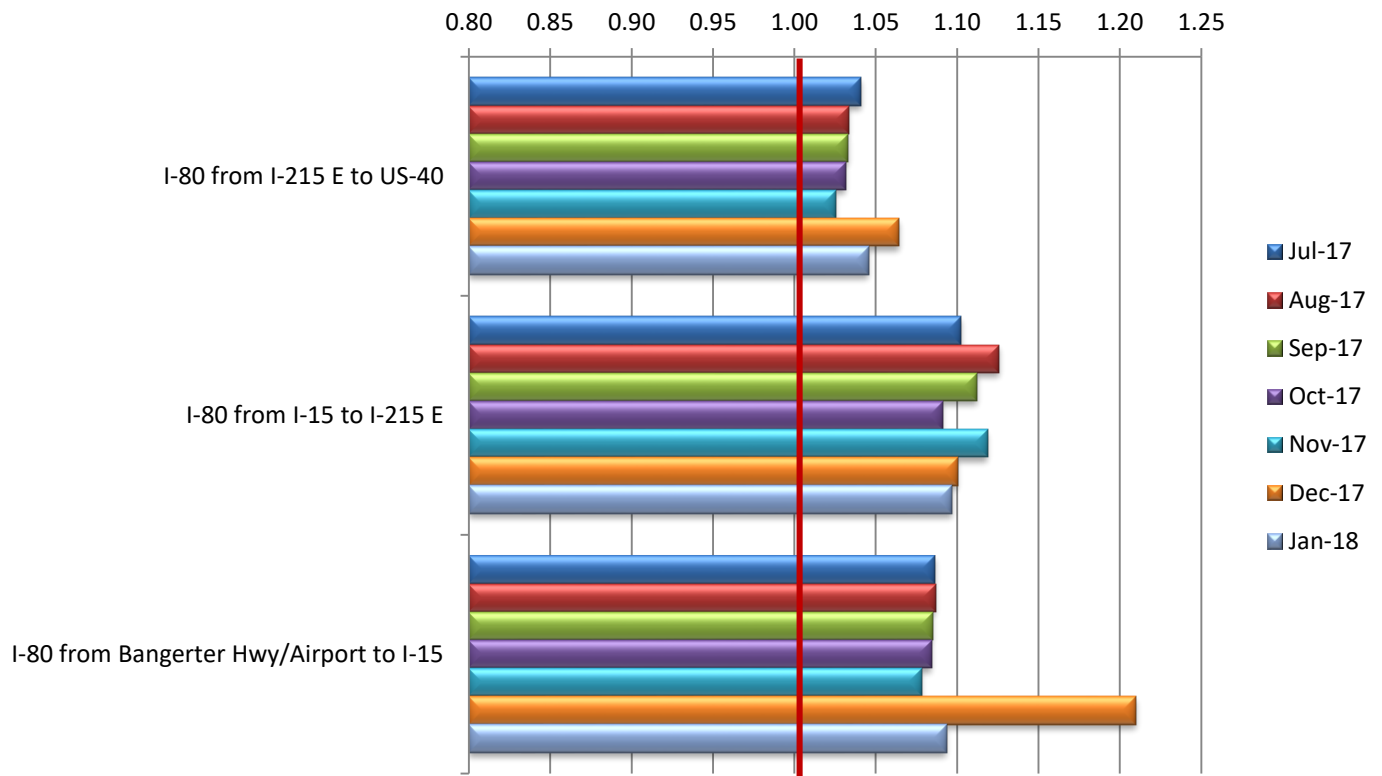
AM Peak Travel Time Index for I-15 FY 18



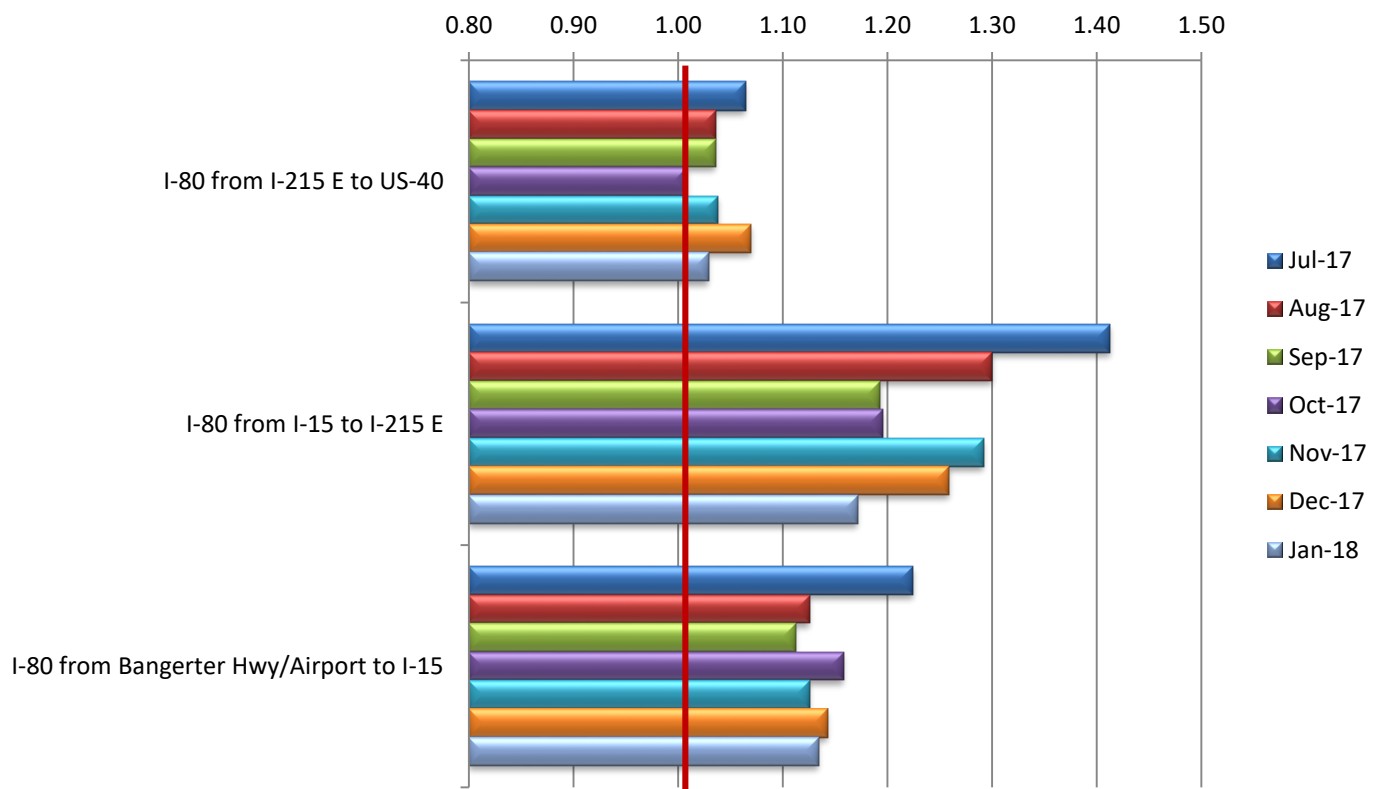
PM Peak Travel Time Index for I-15 FY 18



AM Peak Travel Time Index for I-80 FY 18

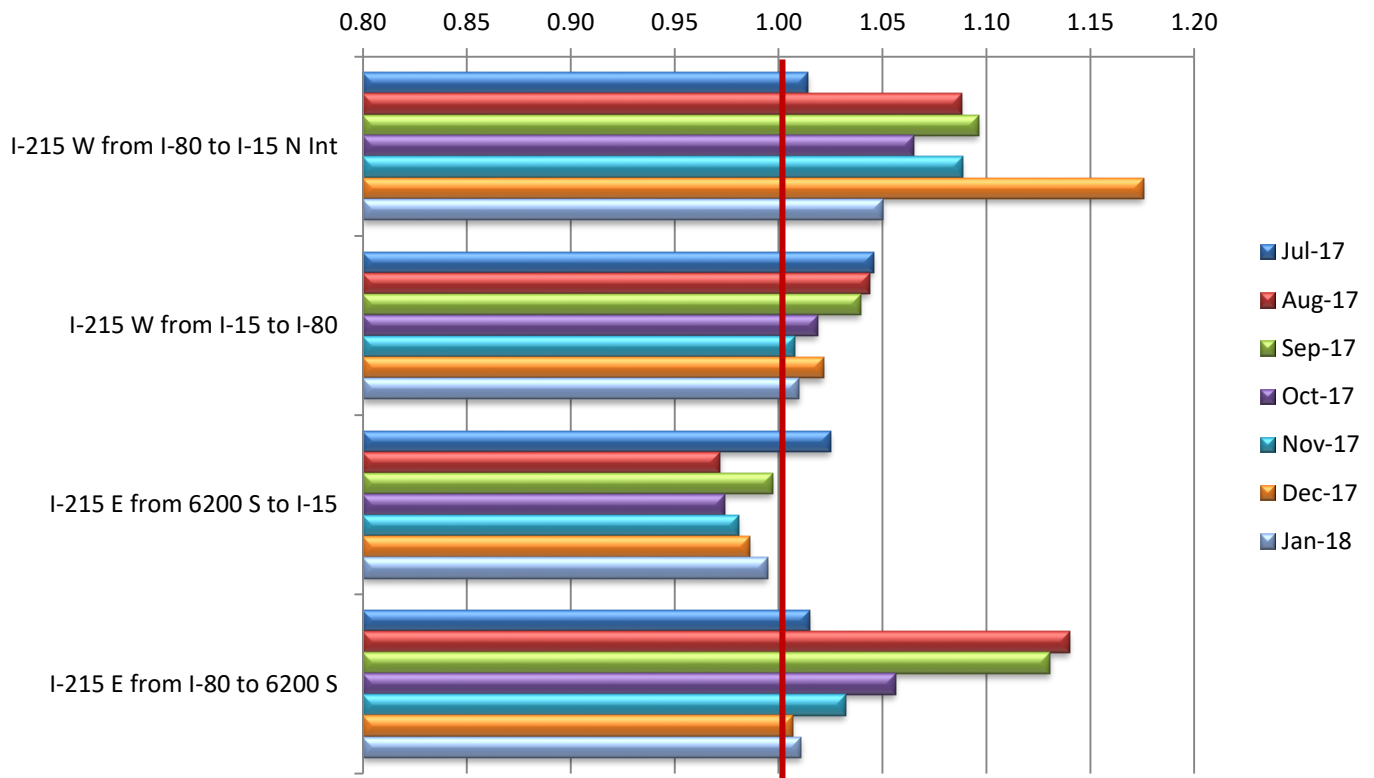


PM Peak Travel Time Index for I-80 FY 18

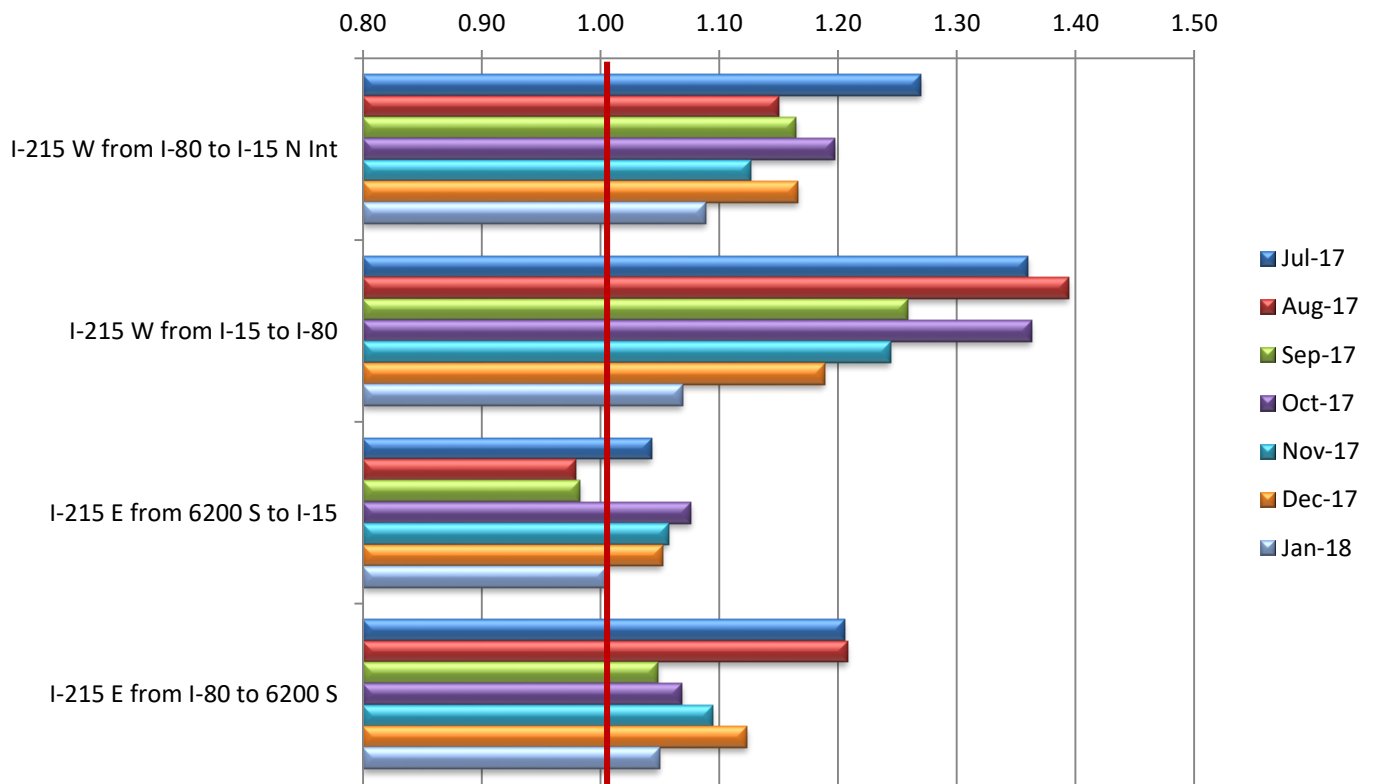


Freeway Traffic Level of Service

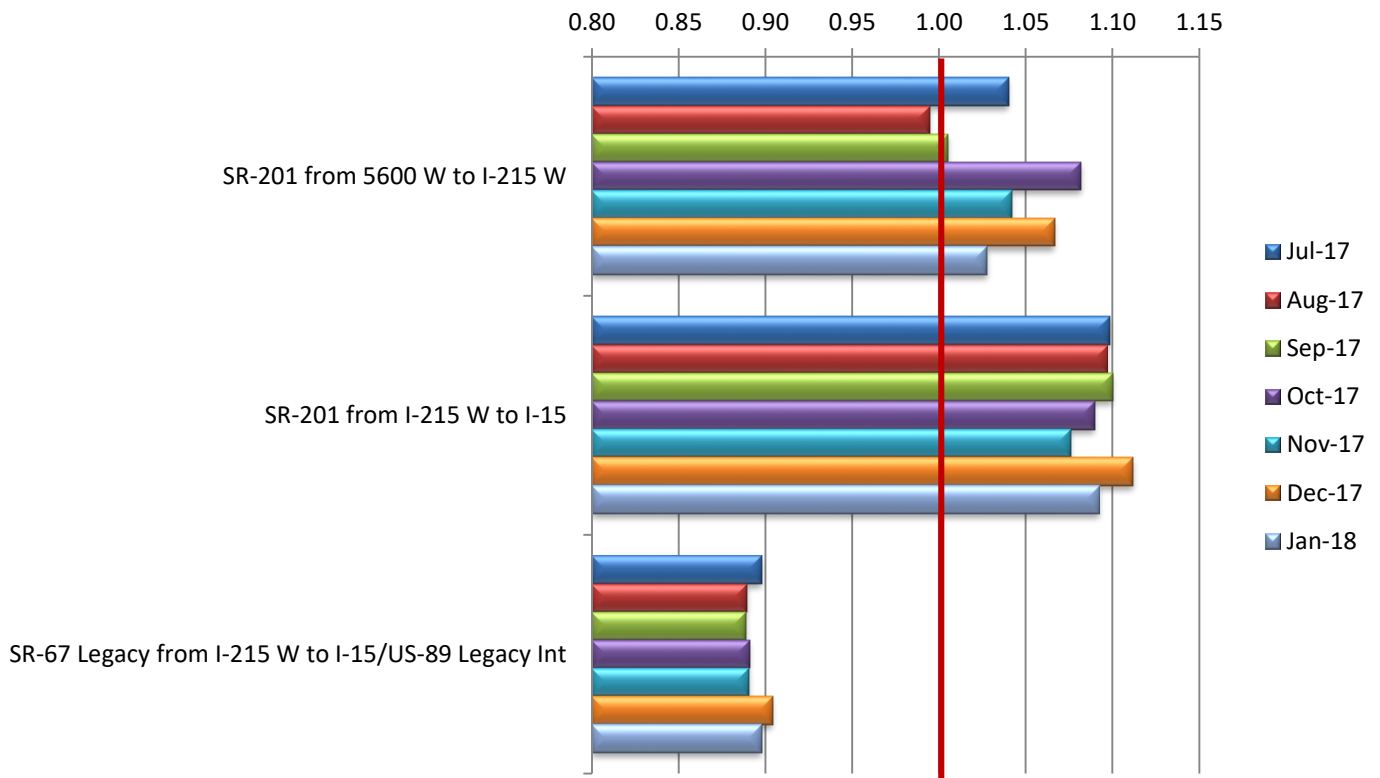
AM Peak Travel Time Index for I-215 FY 18



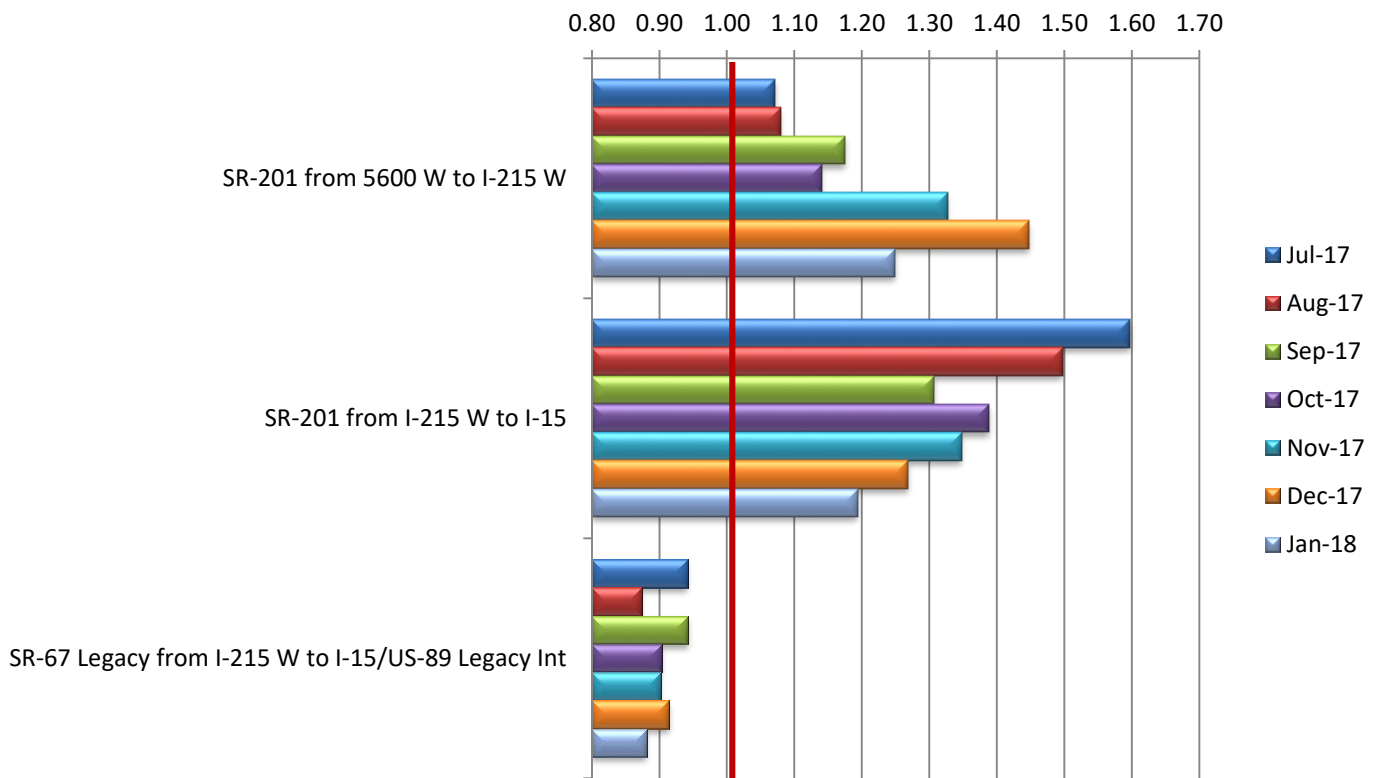
PM Peak Travel Time Index for I-215 FY 18



AM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 18

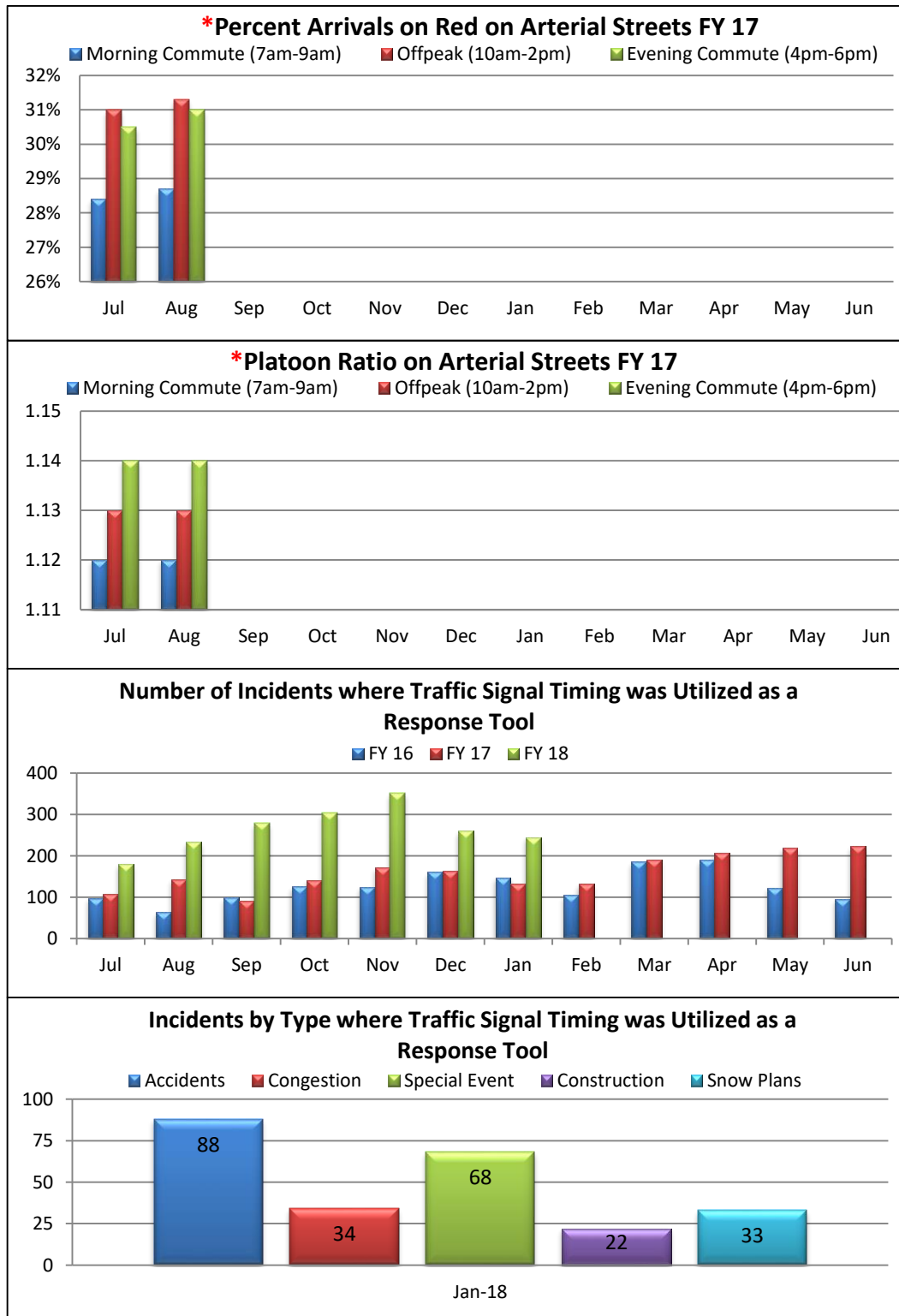


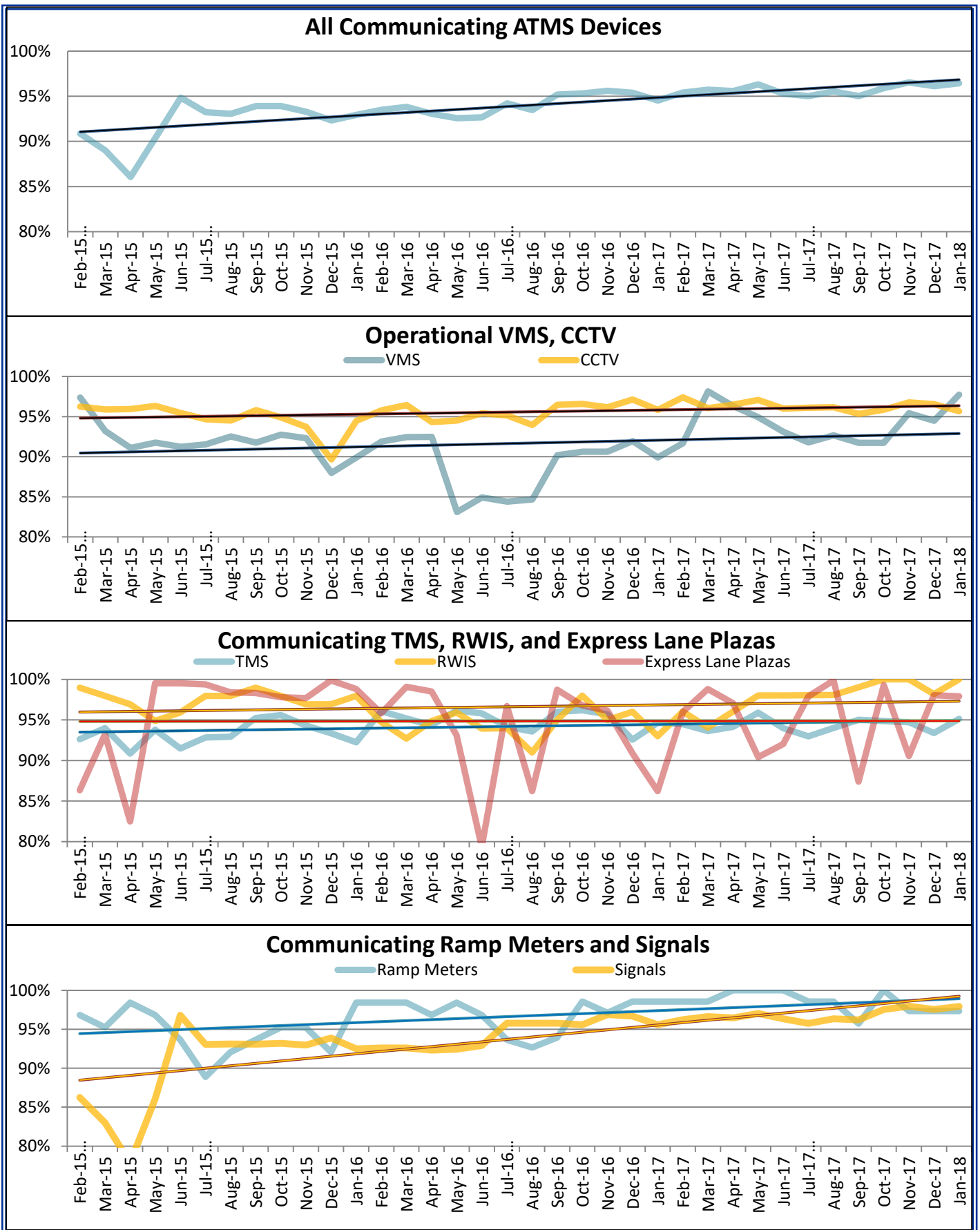
PM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 18

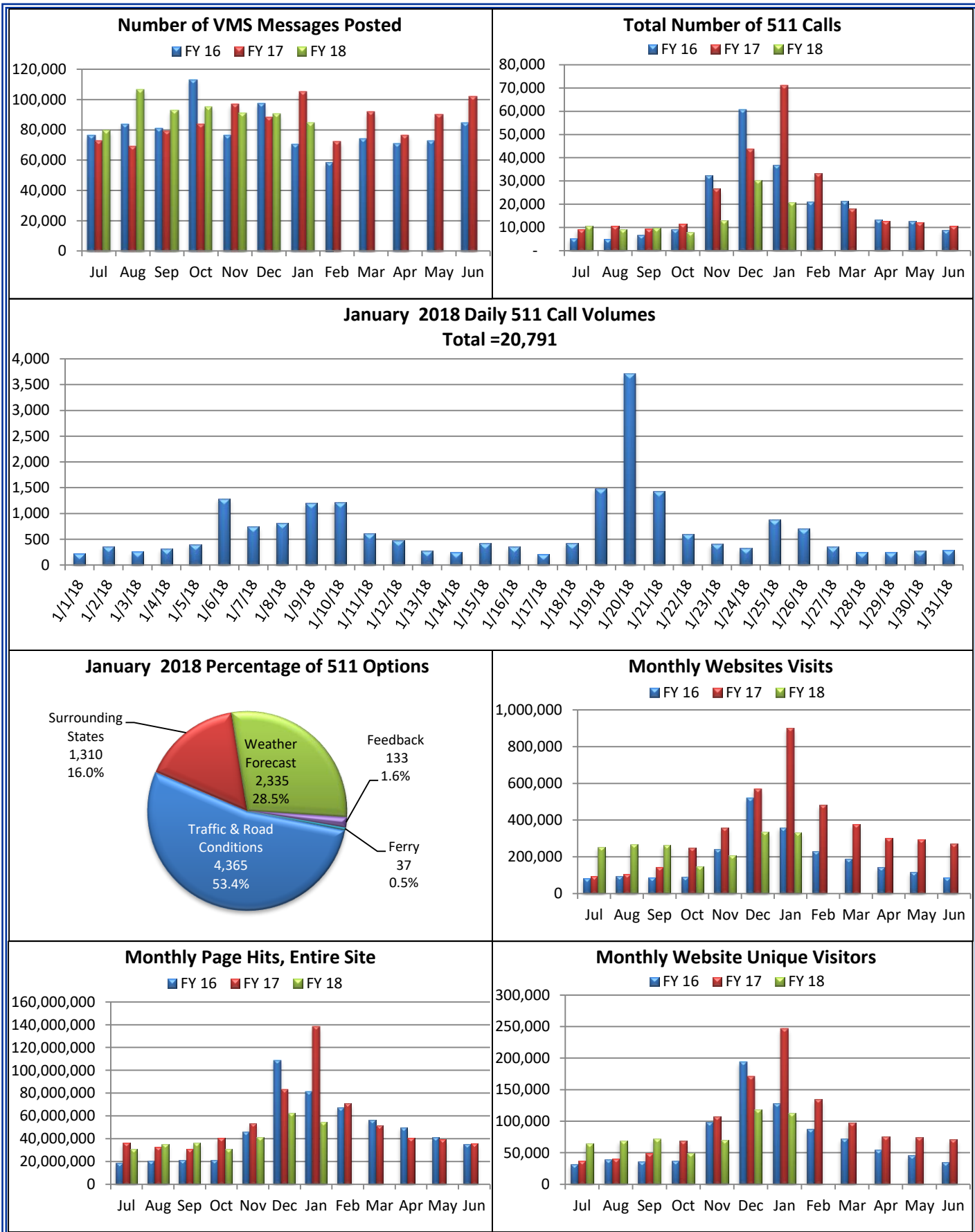


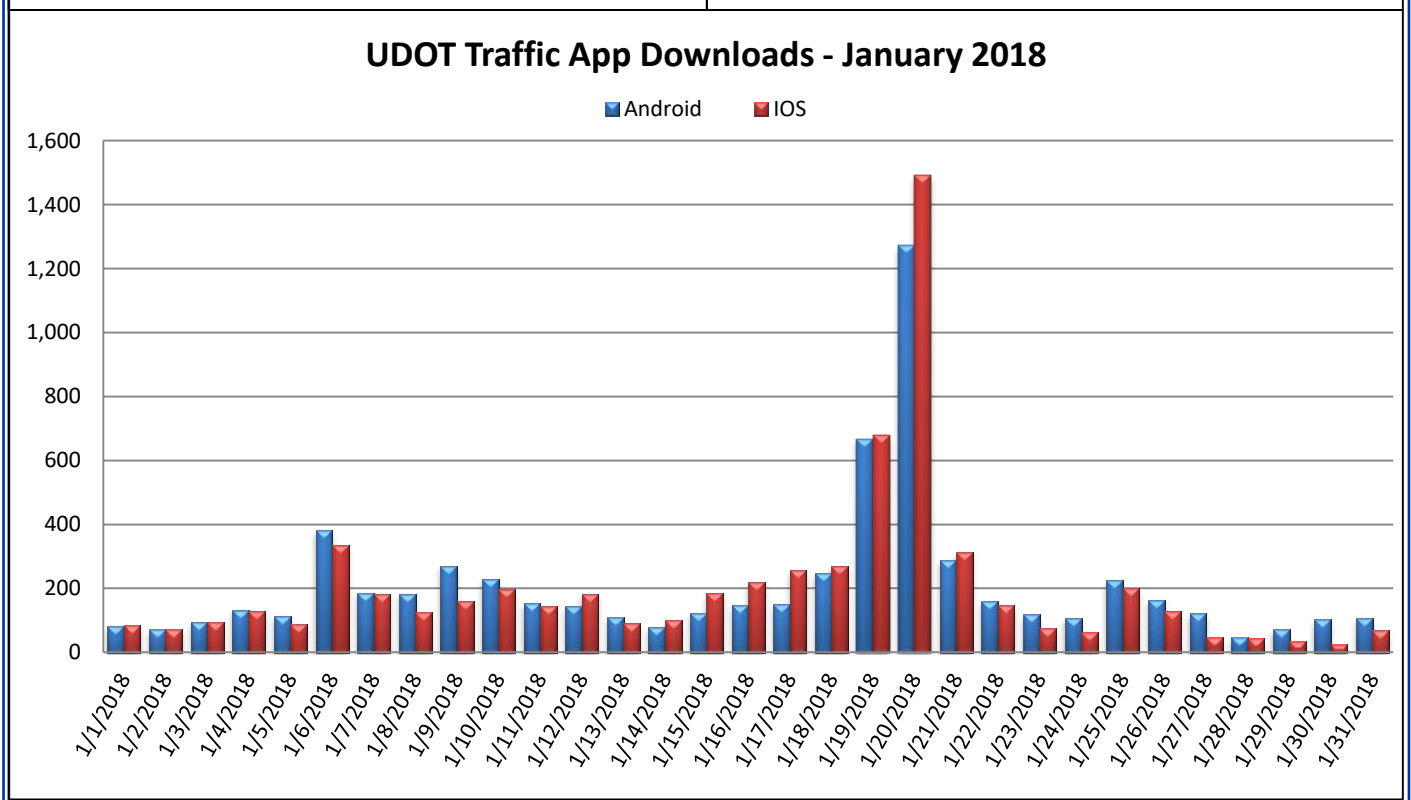
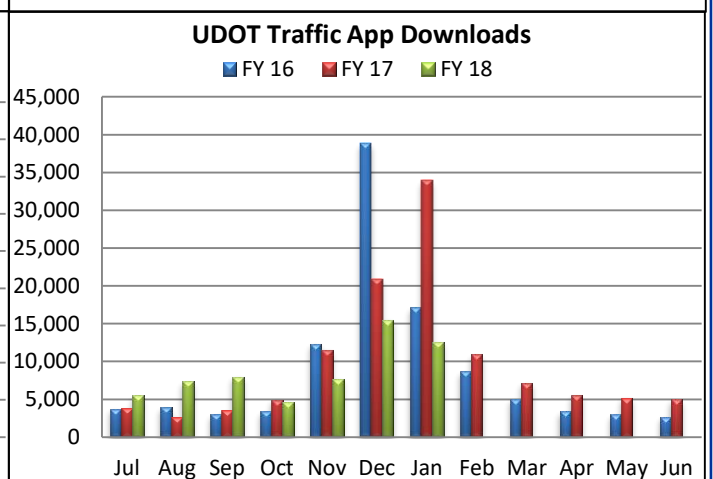
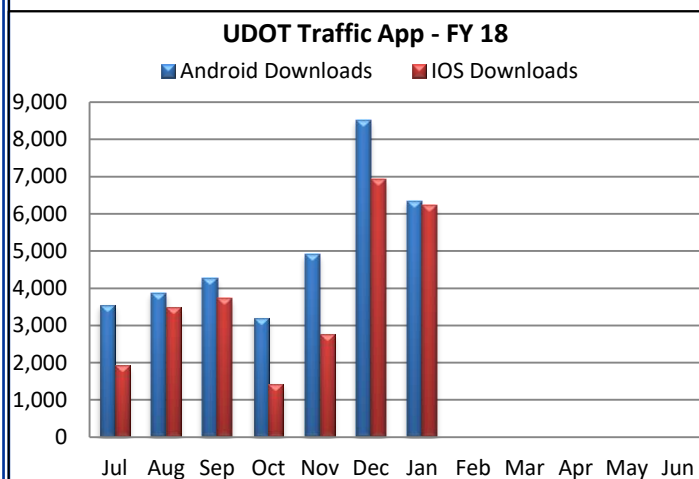
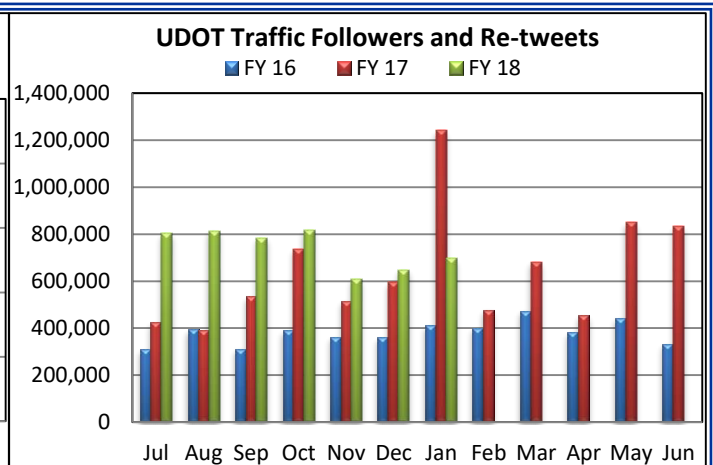
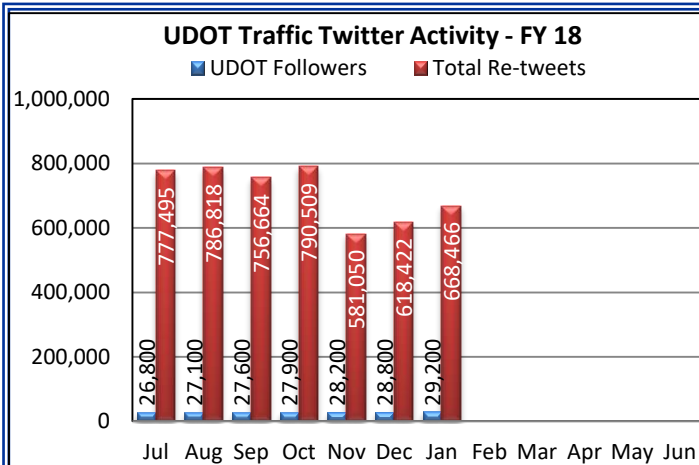
Arterial Traffic Level of Service * No data available since Aug 2016

The percent arrival on red along the arterial statistics are generated automatically through the automated traffic signal performance measures, which show real-time and historical functionality at signalized intersections. The system automatically time-stamps when each vehicle arrives at the intersection and then compares the detection time-stamp if the phase was green or red. The percent arrival on red data is averaged over the 24 hours of the day and days in the month. . The lower charts shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.

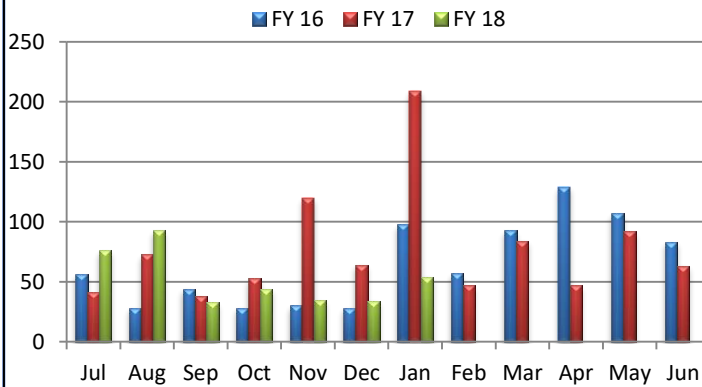




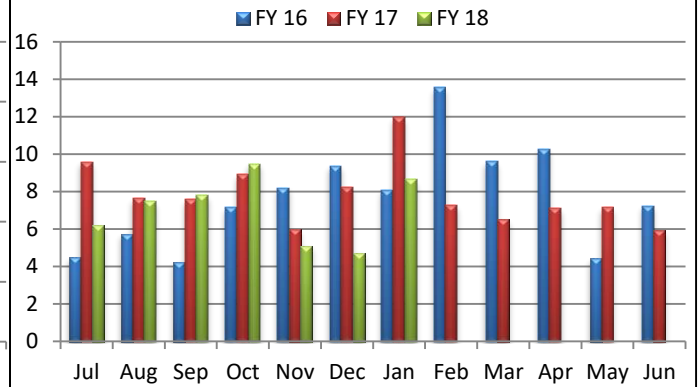




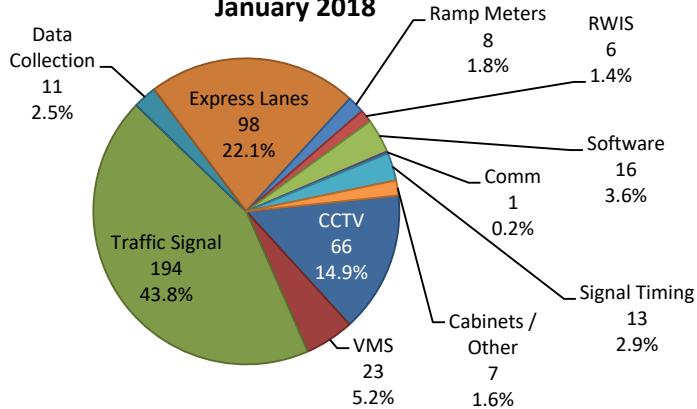
Number of "Ask UDOT Traffic" Questions



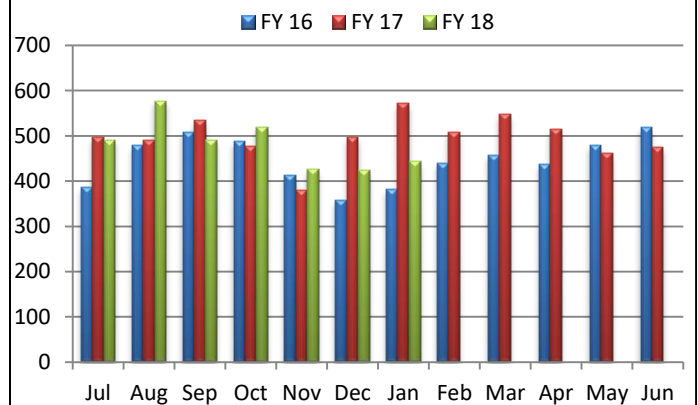
Overall Average Work Order Turnaround Days



New Work Orders by Device Type January 2018

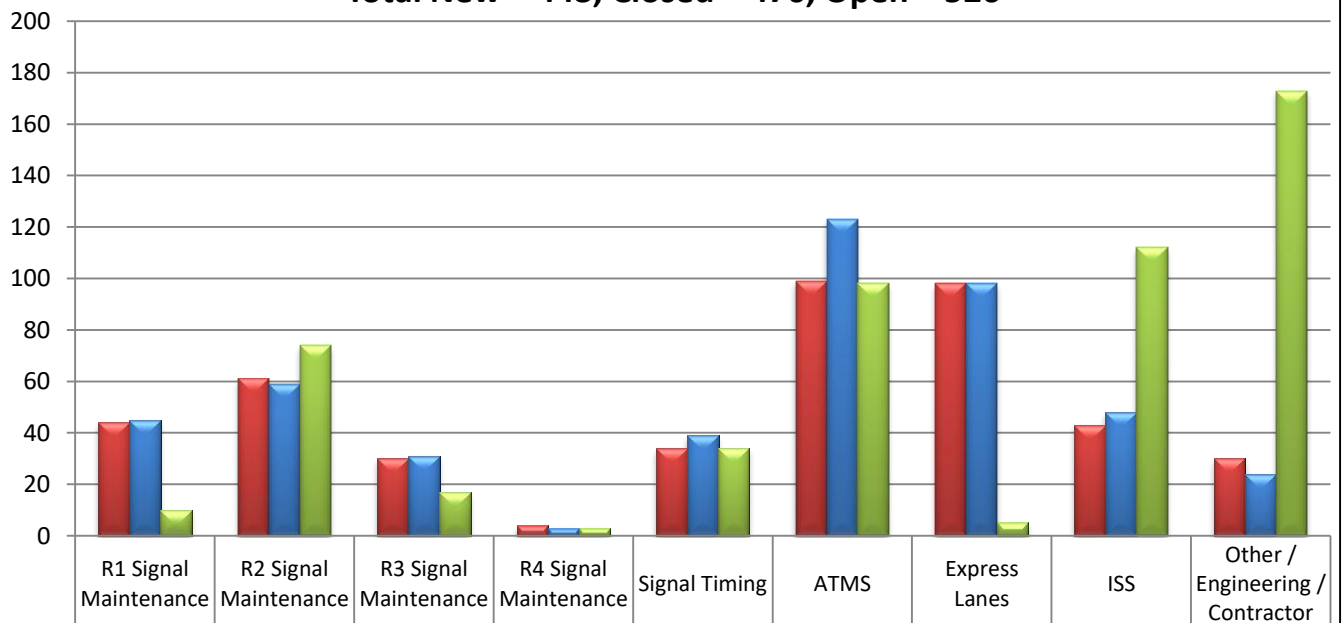


Number of New Work Orders



Work Order Statistics by Group - January 2018

Total New = 443, Closed = 470, Open = 526



New	44	61	30	4	34	99	98	43	30
Closed	45	59	31	3	39	123	98	48	24
Open	10	74	17	3	34	98	5	112	173

CONTROL ROOM

Incidents logged: 1639

Jpages sent: 351

Phones

- Inbound calls: 1050
- Outbound calls: 711



Weather

- The Control Room helped manage traffic during a winter storm on January 20th. From Midnight to 11:00 A.M. that day the control room logged over 200 traffic incidents, received over 100 phone calls, and made over 60 outbound calls.

Events

- Support was given to the Sundance Film Festival with event planning and VMS messaging. Support of President Monson's funeral by tracking the event using CCTV, making signal timing adjustments, and delivering traveler information.

Incidents

- On January 19th a semi carrying fuel caught fire on I-15 at 7400 S. The control room initiated incident escalation, helped manage traffic using alerts, 511 messaging, VMS, and populating incident information on UDOT's traffic app and website. The control room helped coordinate efforts by gathering information from the field and disseminating by way of the TOCL. The control room was in regular contact with Region 2, IMT's on scene, media, the incident commander, and TOCL.

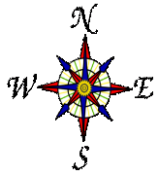
Road work

- The control room supported full closures of I-15 in Davis County, among other smaller projects.

TRAVELER INFORMATION

- Assisted with Traffic and Safety Zero Fatalities RFP selection.
- Participated in peer exchange with Colorado TSMO director.
- Continued work on the UDOT Traffic app/web remodel project.
- Continued work on the UDOT 511 phone line remodel project.
- Hosted tours for boy scout groups.
- Participated in special event meetings for the Jordan River Temple open house.
- Managed special event traffic for LDS President Monson's funeral, collaborating with the Salt Lake City Police Department.
- Provided ideas for UDOT Beyond the Barrels podcast discussing connected and autonomous vehicles.
- Continued work on the UDOT/WTs women's mentorship program.





UDOT WEATHER GROUP

Weather Operations

The first UDOT weather brief video of the season was produced for the storm on January 19-20. The Weather Group sited several new RWIS locations in January to plan for spring/summer installation. Also, a new type of low-light PTZ camera came online at the SR-224 at Meadows Drive RWIS, near Park City, in January.

Lastly, there were four tours of the Weather Operations room including a group of CDOT TSM&O employees, a troop of boy scouts, University of Utah Osher Lifelong Learning students, and a BYU student led by Lisa Miller and Marjorie Rasmussen.

Weather Group Statistics

- 478 – Overall UDOT Weather Interactions
- 91 – Outgoing Weather Alerts
- 10 – NWS collaborations
- 7 – Road Weather Alerts



Climatology

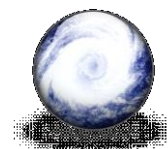
While there was one significant snowstorm that impacted Utah in January, the entire state experienced above normal temperatures for the month of January. Where some of the heaviest snow occurred in central Utah during that storm, above normal precipitation was recorded, but precipitation was below normal in northern and southern Utah.

Salt Lake International Airport observed 9.6" of snow (normal = 12.5"), 0.82" of precipitation (normal = 1.25"), and was 9.5 degrees above normal (normal mean = 29.5 degrees).

Fillmore observed 7.2" of snow (normal = 11.4"), 1.82" of precipitation (normal = 1.32"), and was 6.2 degrees above normal (normal mean = 28.6 degrees).

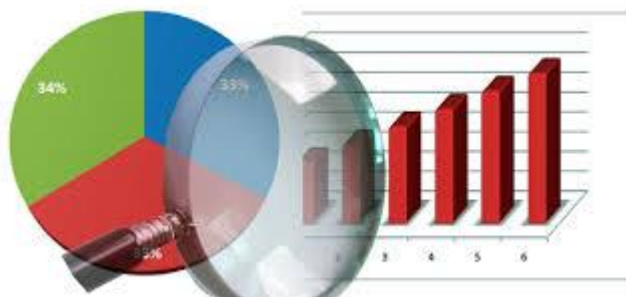
For the current monthly climate outlook, please visit: <http://www.nw-weather.net/UDOTMonthlyOutlook.pdf>

For the current seasonal outlook, please visit: <http://www.nw-weather.net/UDOTSeasonalOutlook.pdf>



TRAFFIC OPERATIONS, ANALYSIS & REPORTING

- Here (pro-data source) data configuration/congestion reporting.
- Delay on State facilities for the Legislative discussion.
- Governor's performance metric.
- I-15 Frontage Road evaluation for Region Three.
- Little Cottonwood Canyon EIS data collection evaluation.
- TSMO project kick-off.
- Federal performance metrics.
- Region Three support.
- I-15: 400 North, SLC to 2600 South, Woods Cross.
- Region Two Blynscy (blue tooth vendor) deployment support.
- I-215/Redwood Road MOT support south end.
- Traffic modeling standards.
- Utah Smart State discussion.
- I-80 VSL.
- I-215/Highland Drive on-ramp modification.
- I-15 Express Lanes in Region One.
- Life on State.
- Region Three long range plan update.
- ITE presentations/conference.
- Performance base traffic control.
- STREAMS demonstration.
- Dashboard/project prioritization.
- SR-210/Fort Union intersection improvements.
- Springville/Spanish Fork interchange improvements.
- SR-36/I-80 improvements.
- Heber City corridor screening/planning.



ATMS MAINTENANCE



The Field Team

- Completed 17 LFOT inspections 14 for CCTV and three for VMS.
- Worked with weather department on the power inspection of the power pedestal located in Wellsville US-91 MP 20.15.
- Emergency repair for ramp metering located I-15 SB - 10600S due to vandalism, repaired conduit and pulled new wire for signal heads.
- Damaged ramp metering cabinet located at I-15 SB - University Avenue, replaced a 334 cabinet, worked with contractor on replacing H frame, and disconnect switch and transformer.
- Total rebuilds for camera sites along I-15. All hardware has been replaced and upgraded to UDOT standards.

The Field Team closed a total of 92 work orders for the month of January.

The Lab Team

- Inclusive of Digi Terminal Servers, Traffic Signal Controllers, 2070 Controllers, Wireless Radio, Wavetronix Radar and CCTV a total of 52 devices were tested/repared.
- One Traffic Signal cabinet was setup, programmed, burned in and disbursed for 11400 S Redwood Road.
- Two spare Traffic Signal cabinets were picked up by the Signals Group
- Support was provided to the Express Lanes Group with the delivery of a new 334 cabinet to replace a knock down.
- Sent three BlueMAC data collectors back to Digiwest for repairs.
- Located junction boxes, conduit and fill ratios on SR-36 for designer.
- There are 31 open work orders, 18 of which are on hold for loop replacements.

The Electronics Lab closed 14 work orders during the month of January.



Express Lanes Team

- Performed one system drive per week.
- Repaired 30 lane controllers.
- Replaced 22 lane controllers.
- Programmed 40 lane controllers.
- Upgraded six lane controllers and two lasers.
- Contractor upgraded 15 lasers and 20 TSI's due to a project.
- Rebooted four lane controllers and six VTMS's.
- Restarted services on 10 lane controllers.
- Installed six relays.
- Repaired one cabinet knockdown with help from The Field Group and The Lab Group.
- Performed PM's on 24 cabinets and eight lane location devices.
- Received assistance from The Field Team with a laser upgrade on short notice.
- Received assistance from Kyle Esquibel from The Field Group when needed.



The Express Lane Team closed 281 work orders in the month of January.



Region 1

- **Statewide Signal Interconnect (12631):** Substantial completion has been met. Integration continues.
- **SR-37; 5100 W. to SR-108 (13037):** Under construction. In 30 day burn-in.
- **I-215 Redwood North (12674):** SFM ordered.
- **Sardine Canyon US-89 from Brigham to Wellsville (13744):** Americom Tech and Skyline Electric are the subs. Construction has been placed on hold until spring. Construction to resume soon.
- **I-15; Farr West to Brigham (10491):** Traffic Monitoring Station (TMS) improvements and VMS installation. The 30 day testing is complete.
- **SR-97 (5500 South) & 4300 West (15446):** In design.
- **SR-108 and 1475 W. (14803):** In design.
- **SR-126 and 6000 S. (15800):** In design.
- **SR-126 and 4800 S. (15801):** In design.
- **5 VMS Region 1 (16041):** In design. PIH scheduled for Feb.

Region 2

- **SR-111 and 2700 S:** Along with the pavement and widening, new conduit and fiber was installed through the SR-111 corridor. Once fiber was placed and new traffic camera was installed to improve our operational situation awareness to a fast growing congested area. The 2700 S intersection was the first UDOT intersection to have a complete Conduit By-pass ring. This established a complete conduit path in all directions underground and around the intersection. This intersection had several utility conflicts and during construction, there were two gas line hits, which demonstrates the underground complexity of our intersections. This conduit ring will make it easy for UDOT and other fiber companies to find path through intersections underground without going aerial and conflicting with our traffic signal equipment, as well as not having to disturb corner sidewalk, pedestrian ramps, and curb drainage.
- **10600 South – Jordan Gateway to Redwood Road:** Road widening to have a complete third lane in both Eastbound and Westbound is underway. With that will include new conduit system and fiber, with new cameras added at some of the intermediate intersections to improve traffic operations.
- **Redwood Road – from Bangerter to 12600 South:** Major road reconstruction will build out a complete and widened cross section. Along with a new conduit and fiber system, there will be three new cameras added to new signalized intersections along the corridor.

Region 3

- **American Fork Canyon ATMS:** Region 3 is working with the Forest Service, the National Park, American Fork City, and Utah County to place conduit and fiber up American Fork Canyon. A waterline project will install the conduit and fiber from the mouth of the canyon to just before Timpanogos Cave. We will meet with the group in February to discuss timeline.
- **PIN 15573 US-191 Guardrail Replacement:** Project in Design. Coordinating with project to ensure they do not impact fiber placement by Strata.
- **PIN 10265 – SR-198; Woodland Hills Drive to Arrowhead Trail in Spanish Fork:** Project in Design. This project will add fiber along this stretch and connect to existing signals. It is currently in need of funds due to some high ROW costs.
- **PIN 11897 – US-89; Center Street to Bulldog Blvd in Provo:** Project in Design. This project will replace the existing fiber and connection to existing signals. If possible, we'd like to identify funds to fill a gap in fiber just above this project on the Orem/Provo hill.
- **PIN 10137 - Provo; US-89 (300 S); 100 East to 700 East:** Waiting for Procurement contract- Additional micro duct and fiber installation to be done on a separate procurement contract planned for the near future.
- **PIN 10689 - Saratoga Springs; SR-68 Centennial Blvd to Pioneer Crossing:** Project under construction. The contractor will perform Integration work. Met with another contractor on site to discuss how to address their needs. Fiber cutover and splice still not complete.
- **PIN 12158 - Lehi; I-15; Lehi Main St to SR-92:** Working on setting up a Mini TOC for the Technology Corridor offices.
- **PIN 11982 - Saratoga Springs; SR-85 (MVC) SR-73 to 2100 North:** Project in Design. Another PS&E is scheduled for February.
- **PIN 9994 – US-89; 220 South Pleasant Grove to 500 East American Fork:** Project in Design. ITS Program Management added funds to this project in July to continue all the way to 220 South Pleasant Grove.
- **PIN 14983 – Continuous Count Stations (CCS) Interstate/Arterial:** Team met in October and identified potential locations for Utah County count stations. The contractor will provide an estimate of what it will take to connect all of them.
- **PIN 15275 – Saratoga Springs; SR-68 Village Pkwy to Grandview:** Pending advertisement.
- **PIN 13421 - Springville; SR-77 (400 S); Spanish Fork Main St. to I-15:** Project has been awarded. PS&E was held the beginning of August. Advertisement anticipated 2018 construction season.
- **PIN 13668 - Lehi; Main St @ US-89/State St Signal(s):** Project has been awarded.
- **PIN 13389 – US-40; Daniels Canyon Passing Lane North of Summit:** Project has been awarded and will construct 2018. This project will add a fiber connection and power to two cameras and an RWIS. ATMS money was added to this project to fill the fiber gap between an existing construction project and this one. With the completion of the project, we will have fiber on US-40 from Heber to Daniel's Summit. The conduit for the fiber was installed by Strata this fall.

Region 3 (cont'd)

- **PIN 10266 - Provo; SR-256; 800 East to Univ Ave BRT:** Project under construction. Loaned contractor pair of wireless radios to fix University Parkway @ Freedom fiber drop dig up.
- **PIN 13244 - Utah County Signal Interconnect:** Fiber installation inspection shows cable was stressed during installation. The damage is within the first 600' on the south end of US-89 in Springville. Working with contractor on repair options.
- **PIN 13061 - American Fork; US-89 @ Main St./200 East:** Learned 'no pay' item was included for the CCTV installation. Will use WTO method to get camera installed.
- **PIN 14909 – Fiber; Vernal to Manila (US-191/SR-44):** Project on hold pending Federal approval of UEN fiber installation.

Region 4

- **10711 – US-6 Fiber Upgrade Helper to Price:** Hunt identified work they were paid for that was removed from project. They agreed to cut UDOT reimbursement check.
- **10783 – SR-18; St. George Blvd to Sunset Blvd:** Project under construction.
- **11467 – I-15; M.P. 22 to M.P. 28 Climbing Lane:** Project in advertisement.
- **11515 – SR-9; Rockville to Zion National Park:** Project under construction.
- **12780 – I-15; Bingham Rd. to Dixie Dr.:** Project under construction.
- **14366 – SR-9; Passing Lanes, Midway to Rockville:** Provided PIH comments.
- **14908 – ITS upgrades Dixie MPO:** Concept report being developed.
- **14912 – US-6/US-191; Helper to Blanding:** Project under construction.
- **15667 – Region 4 Signal Interconnect:** Continuing the evaluation of the signals still not connected to Utah Traffic network outside of the MPO boundary to determine if a concept report is necessary. If it is not, we will move straight to construction.



ITS Standards and Specifications:

- Rule 930-7. Standard Drawing AT6 - Conduit Details will be revised to match the changes evolving in the Administrative.
- An editorial change will be made to Standard Drawing AT12 to clear up a discrepancy in the number of conduits shown AT 11A and AT 11B. All three drawings will match using 3-2 inch conduits.
- An editorial change will be made to Standard Specification 13553 - ATMS Conduit, to correct a discrepancy in the depth of sand fill so it matches the requirements shown in AT 6.
- Met with Mike Garcia to explain the TMD's request for changes in the Construction Inspector's Guide Chapter 7 - Traffic Signals, Lighting and ATMS. We also discussed posting the new ATMS Inspection Forms for consultant inspectors on line with the Construction Forms.
- Worked with a material vendor on Standard Specification 02821 – Chain Link Fence. The vendor requested that UDOT review the material requirements for fence post piping in order to allow a higher strength and thinner walled pipe.

ITS Procurement:

- The contract for the 334C and Basic Size 1 - Traffic Signal Control Cabinets will expire in April 2018. A new contract process was initiated to renew this equipment contract.
- The contract for the 336 Traffic Signal Control Cabinets will expire in April 2018. A new contract process was initiated to renew this equipment contract.
- A meeting was scheduled for February with Talley and Redline Radio to discuss the AN80i radio's replacements. That model of broadband data radio will no longer be supported by the manufacturer.
- The major radio and component supply contracts with Talley, Tessco and others will expire in February 2018. These are State-wide contracts and are needed to supply broadband data radios. Utah Communications Authority owns the contracts and will be responsible for their renewal.
- The TMD initiated the process to acquire a new contract for the 2070 Advanced Transportation Controller. The previous contract had expired last year.

Special Projects:

- Work continued on the VMS - Project F-15-7(335)290. The 45 ft. CCTV pole required for I-215 EB at 2300 East finally arrived and was installed.
- WFRC funding applications for the year 2024 were submitted to WFRC.
- Attended a meeting with WCEC to discuss ATMS fiber, conduit and pull box requirements for the new Jeremy Ranch interchange project.

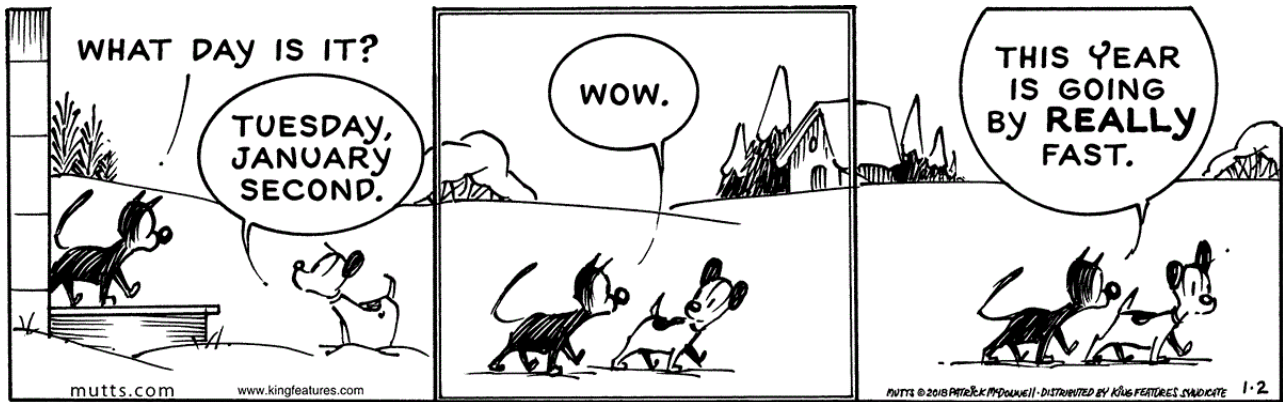
What a great looking bunch of guys!!!



From left to right – Tom Ranson, Max Hardcastle, John Leonard, Boyd Fronk, and Howard Prince.

This photo is from the early 90s.

What were you doing in the 90s?



Happy
New Year
2018



A YEAR FROM NOW
YOU MAY WISH
YOU'D STARTED
TODAY

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Acronyms

CCTV	Closed Circuit Television	DPS	Department of Public Safety
EIS	Emergency Information System	HAR	Highway Advisory Radio
I2TMS	Integrated Interagency Traffic Management System		
ITS	Intelligent Transportation System	LFOT	Local Field Operations Test
MIC	Manager in Charge	MOT	Maintenance of Traffic
RWIS	Road-Weather Information System	TAC	Technical Advisory Committee
TMD	Traffic Management Division	TMS	Traffic Monitoring Station
TOC	Traffic Operations Center	VMS	Variable Message Sign



Did you know? An iceberg contains significantly more total heat energy than a burning match. The reason is the sheer size of the iceberg.

